PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

File Number of the Applicant or Attorney	ADDITIONAL PROCESSING see Form PCT/IPEA/416	
03.0806.3.pu		
International Application Number	International Application Date (Day/Month/Year)	Priority Date (Day/Month/Year)
PCT/EP 03/08366	29/07/2003	29/07/2003
International Patent Classification (IPC) or national classification and IPC		
G06F3/14		
Applicant		
INFORSCREEN GESELLSCHAFT FÜR ... ET AL.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

   a. ☒ *(sent to the applicant and to the International Bureau)* a total of 4 sheets, as follows

      ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing corrections authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

      ☐ Sheets which supersede earlier sheets, but which this Authority considers to contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box

   b. ☐ (sent to the International Bureau only) a total of (please indicate type and number of electronic carrier(s)) containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to the Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains specifications concerning the following points:

I	☒	Basis of the report
II	☐	Priority
III	☐	No development of an opinion concerning novelty, inventive activity, and commercial applicability
IV	☐	Insufficient unity of the invention
V	☒	Substantiated finding according to Article 35(2) with regard to novelty, inventive activity, and commercial applicability; documents and explanations in support of this finding
VI	☐	Certain cited documents
VII	☐	Certain deficiencies in the international application
VIII	☐	Certain notes concerning the international application

Date of submission of the demand	Date of completion of this report
October 22, 2004	September 06, 2004

Name and mailing address of the International Preliminary Examination Authority	Authorized Official
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INTERNATIONAL PRELIMINARY REPORT ON PATENTATBILITY International Application No. PCT/EP 03/08366

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise specified under this item.

   ☐ The report is based on a translation from the original language into the following language, which is the language of the translation furnished for the following purpose:
   - ☐ International search (pursuant to Rules 12.3 and 23.1 (b)).
   - ☐ Publication of the international application (pursuant to Rule 12.4)
   - ☐ International preliminary examination (pursuant to Rules 55.2 and/or 55.3).

2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

   Description, pages

   1-10 in the originally filed version

   Claims, No.

   1-13 received on May 21, 2005, with letter of May 19, 2005

   Drawings, pages

   1/1 in the originally filed version

   ☐ a sequence listing and/or any related tables – see Supplemental Box Relating to the Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of the following documents:

   - ☐ the description: page
   - ☐ the claims: No.
   - ☐ the drawings: sheet/figure
   - ☐ the sequence listing *(please specify):*
   - ☐ any tables related to the sequence listing *(please specify):*

4. ☐ This report has been prepared without taking account (some of) the amendments annexed to this report and listed below since they have been considered by the Authority to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)):

   ☐ the description: page
   ☐ the claims: No.
   ☐ the drawings: sheet/figure
   ☐ the sequence listing *(please specify)*:
   ☐ any tables related to the sequence listing *(please specify)*:

* *If item 4 applies, some or all of these sheets may be marked "superseded"*

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims 1-13 No: Claims
Inventive step (IS)	Yes: Claims 1-13 No: Claims
Industrial applicability (IA)	Yes: Claims 1-13 No: Claims

2. Citations and explanations (Rule 70.7):

see Appendix

As to Box V

Reasoned statement with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

1. Reference is hereby made to the following citation:

   D2: US 2002/0007987

   Citation D2 is considered to be the closest prior art with respect to the subject matter of Claim 1.
   It discloses a system for the timed switching of image and sound data to a plurality of display devices. Data and switching times are transmitted by a central computer via a splitter computer to a plurality of display computers. The display computer subsequently carries out timed switching.

2. The most important characteristic of Claim 1 not known from D2 is: (the text in brackets follows from the context and was added for reasons of clarity.)

   "... with the control command (Xa, Xb, Xc, Xd) specifying the point in time at which the display computer device (4) *transmits* a ["transformed"] signal (5) [in a graphic card and/or acoustic card format to a display device] and the display device (1) to which the signal (5) is to be transferred, ..."*

   Therefore, the subject matter of Claim 1 is novel (Article 33 (2) PCT).

   The formulation above makes a distinction between data *transformation* and data *transmission*. Thus, based on the claim, the following sequence results:

* [Translator's note: This text, together with a reference to page 9, lines 19-22, appears in Claim 1on the amended sheets [Geändertes Blatt] that are attached at the end of the documents to be translated, not in Claim 1 that follows the description.]

- the control command is transmitted and causes the data to be transformed in the display computer device into "transformed signals" (in the special format specified)
- the control command also contains the transmission time at which the "transformed

signals" are transmitted by the display computer device to the display device.

Thus, the problem to be solved by the present invention can be said to be that the influence of the transformation time is to be minimized to the exact time of the switching procedure (time of transmission to the display device).

The solution of this problem proposed in Claim 1 of the present application is based on an inventive step for the following reasons (Article 33 (3) PCT):

Against the background of D2, it appears that the data are *loaded* at an earlier time; however, it must be assumed that the *transformation* of the data (e.g., into display signals) is started only at the point of time at which it is already desirable that the signals be switched.
Furthermore, the time accuracy of switching in D2 is insignificant (the problem involved is timed switching, not time-synchronous switching) to the point that the problem of an influence of the transformation time to the switching time does not arise.

3. Claims 2-12 are dependent on Claim 1 and therefore also meet the requirements of the PCT with respect to novelty and inventive step.

System Claim 13 also comprises all characteristics of Claim 1 (reference) and thus also meets the requirements of the PCT with respect to novelty and inventive step.

AMENDED SHEETS

Claims

1. A method for the visualization of digital display elements (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) on a plurality of display devices (1), wherein the visualization of display elements (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) on a first display device (1) and the visualization of display elements (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) on a minimum of one additional display device (1) takes place in a chronologically and/or spatially coordinated manner, with the coordination of the display elements (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) concerning the chronologically and/or spatially coordinated visualization of the display elements (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) [page 1, lines 29 to 30] and with the display elements (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) being connected to one another, characterized in that

- a plurality of display computer devices (4) and a control computer device (3) connected to said display computer devices (4) are provided, and that each display computer device (4) is associated with a minimum of one display device (1),
- with a minimum of one display element (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) in a file format and/or a minimum of one reference to a file containing the display elements (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) and a minimum of one control information (t_a, t_b, t_c, t_d) being transmitted to the control computer device (3) in a play list (2) or a sequence plan [page 9, lines 17 to 19],
- with the control information (t_a, t_b, t_c, t_d) specifying the point in time and/or the location of the display of the display element (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) on a display device (1),
- with the control computer device (3) analyzing the play list (2) [page 9, line 26] and generating a minimum of one control command (x_a, x_b, x_c, x_d) from the control information (t_a, t_b, t_c, t_d),
- with the display element (1) and/or the reference and the control command (x_a, x_b, x_c, x_d) being transmitted by the control computer device (3) to the display computer device (4),

- with the display elements (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) from the file containing the display element (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}), which display elements are available in digital form, being transformed as a result of the control command (x_a, x_b, x_c, x_d) by the display computer device (4) into signals (5) in a graphic card and/or acoustic card format in order to. respectively, display or output the display element (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) on or to the display device (1) [page 3, lines 17 to 25] and to transmit it to the associated display device (1), and
- with the control command (x_a, x_b, x_c, x_d) specifying the point in time at which the display computer device (4) transmits a signal (5) and the display device to which the signal (5) is to be transmitted [page 9, lines 19 to 22],
- so that the display computer device (4) serves exclusively to generate image and/or sound signals from the digital display elements (page 4, lines 33 to 35).

2. The method as in Claim 1, characterized in that a plurality of display elements (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) and/or references and control information (t_a, t_b, t_c, t_d) are compiled in a play list (2) and that the play list (2) or separate display elements (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) and/or references and control information (t_a, t_b, t_c, t_d) are transmitted to the control computer device (3).

3. The method as in Claim 1 or 2, characterized in that the play list (2) is analyzed by the control computer device (3), with control commands (x_a, x_b, x_c, x_d) being generated for the display of the display elements (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) and/or references thereto compiled in the play list (2).

4. The method as in any one of the preceding claims, characterized in that the display computer device (4) and the control computer device (3) are integrated into a network, preferably into an intranet.

5. The method as in any one of the preceding claims, characterized in that the same display elements (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) are stored on a minimum of two display computer devices (4) or that the same display elements (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) are transmitted to a minimum of two display computer devices (4).

6. The method as in any one of the preceding claims, characterized in that the control command (x_a, x_b, x_c, x_d) is transmitted close to the time of the desired display of the display element (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) to the display computer device (4).

7. The method as in any one of the preceding claims, characterized in that a first control command causes a file containing a display element (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) to be loaded on the display computer device (4) and/or that a second control command causes the signal (5) to be transmitted by the display computer device (4) to the display device (1) and/or causes the display element (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) to be displayed on the display device (1).

8. The method as in any one of the preceding claims, characterized in that the first control command and the second control command are transmitted so as to be staggered by a period of time or that the first control command and the second control command are transmitted simultaneously, with the second control command causing the signal (5) to be transmitted and/or the display element (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) to be displayed on the display device (1) after a predetermined period of time has elapsed after the transmission of the second control command.

9. The method as in any one of the preceding claims, characterized in that a plurality of display computer devices (4) are synchronized to a reference point in time and that the second control command causes the signal (5) to be transmitted at a predetermined time.

10. The method as in any one of the preceding claims, characterized in that the period of time between the beginning of the transmission of the control command and/or the end of the procedure of loading the display element and/or the transmission of the signal (5) and/or the

display of the display element (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) on the display device (1) is automatically determined.

11. The method as in any one of the preceding claims, characterized in that during the generation of a signal (5) and/or during the display of the display element (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) on the relevant display device (1), a control signal is transmitted to the control computer device (3).

12. The method as in any one of the preceding claims, characterized in that the point in time at which the display element (a_{1-n}, b_{1-n}, c_{1-n}, d_{1-n}) is displayed on the relevant display device (1) is controlled by the control computer device (3) as a function of the period of time determined and/or as a function of the control signal.

13. A system for carrying out the method according to any one of the preceding claims, characterized in that a plurality of display computer devices (4) and a control computer device (3) that is connected to the display computer devices (4) are provided and that each display computer device (4) is associated with a minimum of one display device (1).